

### **REMARKS**

The Office Action dated June 27, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Following the current amendment, claims 26-37 and 41-53, including independent claims 26, 41, and 50-53, remain pending in the present application. In particular, Applicants herein amend claims 26-28, 33, 34, and 50, cancel claims 38-40 without disclaimer or prejudice, and add new claims 51-53. It is respectfully submitted that the amendment adds no new subject matter to the present application and serves only to place the present application in better condition for examination. Entry of the amendment and reconsideration of the rejected pending claims are respectfully requested. It is believed that all grounds for rejection in the Office Action have been addressed and that the present application is currently in condition for allowance in view of the amendment and the following arguments. Claims 26-37 and 41-53 are respectfully submitted for consideration.

#### **Objection to the Specification**

In section 1, the Office Action objects to the Title of the present application as being non-descriptive of the invention to which the claims are directed. Applicants express appreciation for the instruction from the Examiner during a telephone conversation of July 24, 2007 that this objection would be held in abeyance pending the

substantive examination of the claims of the present application and that a more descriptive title would be recommended by the examiner following allowance of the claims.

#### Claim Rejection Under 35 U.S.C. §102(e)

In Sections 3-4 of the Office Action, claims 26-50 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,272,522 of Lin et al. (the Lin reference). According to the Office Action, Lin discloses all recitations of the pending claims. However, as will be discussed below, each of the pending claims 26-37 and 41-53 recites subject matter which is neither disclosed nor suggested in Lin. Applicants respectfully traverse this rejection and request reconsideration in view of the current amendment and the following arguments.

Independent claim 26, from which claims 27-37 depend, discloses a method for balancing the load of resources in a packet switched connection within a communication system that includes processing units for performing communication, at least one load balancing unit for distributing the load to the processing units, and a data storage. The disclosed method includes obtaining a current connection state as well as a current load state of the processing units from the data storage. The disclosed method further includes selecting by the load balancing unit a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs and maintaining information about the load state of each processing unit so that the selecting step is performed by

selecting a processing unit to serve and process a respective packet based on the load state.

Independent claim 41, from which claims 42-49 depend, discloses a device unit for balancing a load of each of multiple processing units performing a packet switched communication connection. The device unit includes means for maintaining a load state of each of the processing units. The device unit further includes means adapted to select a processing unit on the basis of a respective load state on a per packet basis irrespective of a specific connection to which a respective packet belongs.

Independent claim 50 discloses a system configured to obtain a current connection state as well as a current load state of each of the processing units from data storage. The disclosed system is further configured to select by the load balancing unit a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs. Also, the disclosed system is configured to maintain information about the load state of each processing unit so that the selecting comprises selecting a processing unit to serve and process a respective packet based on the load states.

Independent claim 51 discloses a computer program embodied on a computer readable medium that stores code for computer executable instructions. The computer executable instructions are configured to perform a process for balancing the load of resources in a packet switched connection within a communication system that includes , processing units for performing communication, a load balancing unit for distributing the load to the processing units, and a data storage. The computer implemented process

includes obtaining a current connection state as well as a current load state of the processing units from the data storage. The computer implemented process further includes selecting by the load balancing unit a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs and maintaining information about the load state of each processing unit so that the selecting step is performed by selecting a processing unit to serve and process a respective packet based on the load state.

Independent claim 52 discloses a system that includes processing units for performing communication. The disclosed system also includes a load balancing unit for distributing the load to the processing units and a data storage. In particular, the load balancing unit is configured to obtain a current connection state and a current load state of the processing units from the data storage and to maintain information about the load state of each of the processing units. the load balancing unit is further configured to select a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs by selecting one of the processing units to serve and process a respective packet based on the load state.

Referring now to independent claim 53, a disclosed load balancing unit is configured to obtain a current connection state and a current load state of each of multiple processing units. The disclosed load balancing unit is further configured to maintain information about the load state of each of the processing units. Also, the disclosed load balancing unit is configured to select a processing unit on a per packet basis irrespective

of a specific connection to which a respective packet belongs by selecting one of the processing units to serve and process a respective packet based on the load state of the selected processing unit.

Applicants have carefully reviewed Lin and respectfully submit that each of the above-noted independent claims recites subject matter that is not taught or disclosed by Lin.

As an initial observation, Applicants note that Lin was referenced during the international preliminary examination proceedings of the present case (as reference D1 of the international preliminary examination proceedings). However, after the filing of amendments during the international stage of the present application, the International Preliminary Report of Patentability (IPRP) indicated that amended claims corresponding to the subject matter of the presently pending claims 26-37 and 41-53 would be have industrial applicability and an inventive step. After reviewing the international file, the pending claims and disclosure of the present application, and the disclosure of Lin, Applicants urge that the pending claims are patentable for the same reasons identified in the IPRP, as described below.

In particular, Applicants note that the present application discloses load balancing within a routing subsystem of a communication network. See, *e.g.*, paragraphs 1 and 3 of the U.S. publication of the present application. Accordingly, present claim 26 recites that the balancing concerns the load state of processing units which are intended for "performing communication".

In contrast to this recitation, Lin discloses load balancing of back-end application servers. See, for example, the paragraph bridging columns 2 and 3 that discloses that "The control processor receives raw load status data from agents running on the back-end application servers and generates load distribution configuration data therefrom." Likewise, Lin, at column 6, lines 36-39, discloses that "The resource manager module 52 receives raw data from the back-end application servers indicating their present load status."

In particular, Lin does not disclose load balancing between the switching processors 441, the component most comparable with the processing units as currently recited in claim 26. See, for example, the description of Figs. 2 and 3 of Lin, where the switching processors 441 of Fig. 3 and the disclosure in the present application of the processors 24, as depicted in Fig. 2.

Furthermore, Lin does not disclose or suggest the recitation from claim 26 that "a per packet basis irrespective of a specific connection to which a respective packet belongs."

For example, at column 6, lines 12-28, Lin clearly discloses that the distribution of data packets between the switching processors 44 is selected on a per-connection basis. See in particular lines 20-24 that discloses: "Since each of the switching processors 441 and 442 poll different ones of the network interfaces 371-373 conflicts between the switching processors over received data packets is avoided".

Furthermore, even the distribution of incoming packets at a switching processor between the application servers is still based on a per-connection basis as is described by Lin in connection with Fig. 6. The flowchart of Fig. 6 shows the software process performed by the packet filter module 74 of Fig. 4. See also column 8, lines 49-50 that teaches that the packet filter module 74 is a software module within the switching processor 44; see, also, column 7, lines 61-64.

Specifically, Lin discloses in column 9, lines 21-48, and in particular from the following excerpt from lines 33-44, that the selection between the application servers is based on a per-connection basis:

If it was determined at step 210 that the received data packet was not a new connection with the client, the packet filter module 74 determines at step 212 whether a corresponding entry in the connection table 66 exists ... if the connection table 66 has a corresponding entry for the data packet, then, at step 220, the packet filter module 74 re-writes the MAC address and optionally re-writes the IP address and TCP/UDP port number to reflect the application server and application that is already servicing the connection.

Accordingly, Applicant forward that it is unambiguously clear from the teaching set forth in the Lin reference that neither a load balancing with respect to processing units for performing communication is disclosed, nor is the load balancing disclosed by the Lin reference related to "a per packet basis irrespective of a specific connection to which a respective packet belongs," as recited in claim 26.

Moreover, according to the discussion set forth in the present introductory part, a load balancing on a per-connection basis suffers from certain drawbacks which are

overcome by the recited embodiments of the present application. Accordingly, the embodiment of the present application as recited in claim 26 offers significant technical benefits over Lin.

In conclusion, because Lin neither teaches nor suggests each and every limitation contained therein, claim 26 is consequently allowable over Lin. Reconsideration and allowance of claim 26 in view of these comments is respectfully requested. Claims 27-37 depend from claim 26, and because they include every limitation recited therein, are likewise allowable over Lin on similar grounds.

Independent claims 41 and 50-53 recite similar limitations as claim 26, although of different in scope and although rejected in view of different sections of Lin than claim 26, should likewise be allowable for similar reasons. The remaining pending dependent 42-49 claims should similarly be allowable as depending from allowable claim 41. Reconsideration of the all the pending claims and allowance thereof is respectfully requested.

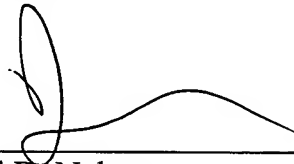
In conclusion, as discussed above, each of the pending claims now recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants submit that the recited subject matter is more than sufficient to render the recited embodiments of the present invention non-obvious to a person of ordinary skill in the technical art of telecommunications. It is respectfully requested that claims 26-37 and 41-53 be allowed in view of the above arguments, comments, and remarks and the application padded to issue.



If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David D. Nelson', is written over a horizontal line.

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Enclosures: Additional Claim Fee Transmittal  
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